UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,524	01/29/2004	Jonathan Paul Patrizio	200314241-1	5514

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EXAMINER
KIM, EUNHEE

ART UNIT	PAPER NUMBER
2123	

NOTIFICATION DATE	DELIVERY MODE
08/21/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 June 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-16_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   In view of the Appeal Brief filed on 06/11/2008, PROSECUTION IS HEREBY

REOPENED. A new ground of rejection for Claims 1-16 is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two

options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37

CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an

appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee

can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have

been increased since they were previously paid, then appellant must pay the difference between

the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing

below:

/Paul L Rodriguez/

Supervisory Patent Examiner, Art Unit 2123

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
      or nonobviousness.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al.

(US Patent No. 7,107,191), in view of Kesavan (US Patent No. 7,228,458).

As per Claims 1 and 10, Stewart et al. teaches a computer system and computer

implemented method (Fig. 1-2) comprising:

a simulator (Fig. 1-2) including:

a virtual-cluster generator for generating a first virtual cluster in a virtual pre-failure

configuration corresponding to a real pre-failure configuration of said real computer cluster (Col.

3 lines 52-67, Col. 4 lines 1-30).

Stewart et al. fails to teach explicitly a virtual-failure event selector providing for

selecting a virtual- failure event corresponding to a real-failure event that applies to a real

computer cluster, and

a virtual-cluster generator for, in response to selection of said virtual-failure event,

generating a second virtual cluster in a virtual post-failure configuration corresponding to a real

post-failure configuration that said real computer cluster would assume in response to said real-

failure event.

Kesavan teaches a virtual-failure event selector providing for selecting a virtual- failure

event corresponding to a real-failure event that applies to a real computer cluster (Fig 3-4, Col. 2

lines 54-67, Col. 3lines 1-3, Col. 4 lines 36-39, Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines

1-16, Col. 6lines 40-50, Col. 7 lines 11-24), and

a virtual-cluster generator for, in response to selection of said virtual-failure event,

generating a second virtual cluster in a virtual post-failure configuration corresponding to a real

post-failure configuration that said real computer cluster would assume in response to said real-

failure event (Col. 7 lines 11-24, Fig 3-4, Col. 2 lines 54-67, Col. 3lines 1-3, Col. 4 lines 36-39,

Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines 1-16, Col. 6 lines 40-50,).

Stewart et al. and Kesavan are analogous art because they are both related to simulation.

Therefore, it would have been obvious to one of ordinary skill in the art of at the time the

invention was made to have included the virtual-failure event selector of Kesavan, in the method

of modular architecture for optimizing a configuration of computer system of Stewart et al.

because a virtual-failure event selector is well known process in a method for optimizing a

configuration of computer system. Kesavan teaches advantageous of system that pretest storage

device and their related components in a complicated clustering system for cluster compatibility

without requiring that the tests be executed on a fully functioning computing cluster (Col. 1 lines

18-27)

As per Claim 2, Stewart et al. teaches wherein, in said real pre-failure configuration, said

real computer cluster runs a software application on a first computer of said real computer cluster

and not on a second computer of said real computer cluster (Col. 16 lines 48-52, Fig. 4), and

wherein, in said real post-failure configuration, said real computer cluster runs said application

on said second computer but not on said first computer (Col. 16 lines 48-52, Fig. 4).

As per Claim 3, Stewart et al. teaches said real computer cluster (Fig. 1-4) including

profiling software (Fig. 2) for providing a descriptive profile of said real computer cluster, said

virtual-cluster generator generating said virtual cluster in said pre-failure configuration using

said descriptive profile (Col. 3 lines 51-67, Col. 4 lines 1-30, Col. 5 lines 1-40).

As per Claim 4, Stewart et al. teaches wherein said real computer cluster is connected to

said simulator for providing said descriptive profile thereto (Fig. 1-4, Col. 3 lines 52-67, Col. 4

lines 1-30).

As per Claim 5, Stewart et al. teaches an evaluator for evaluating said virtual cluster in its post-failure configuration (Fig. 1-4, Col. 8 lines 31-39).

As per Claim 6, Stewart et al. teaches a test sequencer (Fig. 1-4, Col. 12 lines 19-62).

Stewart et al. fails to teach explicitly selecting different virtual-failure events to be applied to said first virtual cluster in said pre-failure configuration so as to result in different post-failure configurations of said virtual cluster.

Kesavan teaches selecting different virtual-failure events to be applied to said first virtual cluster in said pre-failure configuration so as to result in different post-failure configurations of said virtual cluster (Fig 3-4, Col. 2 lines 54-67, Col. 3lines 1-3, Col. 4 lines 36-39, Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines 1-16, Col. 6lines 40-50, Col. 7 lines 11-24).

As per Claim 7, Stewart et al. teaches a statistical analyzer for statistically analyzing evaluations of said different configurations of said virtual cluster (Fig. 1-4, Col. 8 lines 31-39).

Stewart et al. fails to teach explicitly different post-failure configurations.

Kesavan teaches different post-failure configurations (Fig 3-4, Col. 2 lines 54-67, Col. 3lines 1-3, Col. 4 lines 36-39, Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines 1-16, Col. 6lines 40-50, Col.7 lines 11-24).

As per Claim 8, Stewart et al. teaches wherein said test sequencer automatically tests different configurations, said statistical analyzer providing a determination of optimum pre-

failure configuration by statistically analyzing evaluations of the resulting the configurations

(Fig. 1-4, Col. 8 lines 31-39, Col. 12 lines 19-62).

Stewart et al. fails to teach explicitly different configurations of said virtual cluster

against different failure events.

Kesavan teaches different post-failure configurations (Fig 3-4, Col. 2 lines 54-67, Col.

3lines 1-3, Col. 4 lines 36-39, Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines 1-16, Col. 6lines

40-50, Col. 7 lines 11-24).

As per Claim 9, Stewart et al. teaches wherein said simulator is connected to said real

computer cluster for providing said determination thereto, said real computer cluster

automatically reconfiguring itself as a function of said determination (Fig. 1-4, Col. 8 lines 5-30,

Col. 12 lines 62-67).

As per Claim 11 and 13, Stewart et al. teaches wherein steps a, b, and c are iterated for

different configurations of said real computer cluster, said method further comprising providing

a recommended configuration for said real computer cluster (Fig. 1-4, Col. 3 lines 52-65, Col. 5

lines 18-28, Col. 8 lines 5-53, Col. 12 lines 19-67).

Stewart et al. fails to teach explicitly different sets of said predetermined failure types

Kesavan teaches different sets of said predetermined failure types (Fig 3-4, Col. 2 lines

54-67, Col. 3lines 1-3, Col. 4 lines 36-39, Col. 5 lines 12-17, Col. 5 lines 57-67, col. 6 lines 1-16,

Col. 6lines 40-50, Col. 7 lines 11-24).

As per Claim 12, Stewart et al. teaches gathering profile information about said real cluster in said first configuration, wherein said first virtual computer cluster is generated using said profile information (Fig. 3, Col. 4 lines 10-30, Col. 5 lines 1-40).

As per Claim 14, Stewart et al. teaches transmitting said recommendation to said real computer cluster; and implementing said recommended configuration on said real computer cluster (Fig. 1-4).

As per Claim 15 and 16, Stewart et al. fails to teach explicitly wherein said type of failure relates to a failure of a network interface or a hard disk interface.

Kesavan teaches wherein said type of failure relates to a failure of a network interface or a hard disk interface (Col. 5 lines 12-17, Col. 5 lines 56-67, Col. 6 lines 1-16).

Response to Arguments

3.   Applicant's arguments filed 06/11/2008 have been fully considered but they are not persuasive.

The Appeal Brief filed on 06/11/2008, have been fully considered and persuasive, therefore; the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made without any newly cited reference added.

Applicants have argued that:

[06] The issue here, then, is whether the Examiner has established that Stewart discloses a simulator that includes a virtual-cluster generator. The Final Action points to Stewart's

Figs. 1-4 (i.e., all the figures in Stewart) for the disclosure of the simulator including a virtual-cluster generator. Stewart, Fig. 1, depicts a performance simulator 104, but does not depict that it includes a virtual-cluster generator or any other sub-component. <u>Stewart, Fig. 2, depicts a simulator 220, but does not depict that it includes a virtual-cluster generator or any other subcomponent.</u> Stewart, Fig. 3, is a flow chart of a method including steps 324-332 which mention a simulator. However, these steps do not mention a virtual-cluster generator. Fig. 4 depicts a computer system, but does not depict a simulator, let alone one that includes a virtual-cluster generator. Thus, <u>it appears that none of the figures in Stewart discloses a simulator that includes a virtual-cluster generator.</u> Accordingly, the final action has failed to establish that Stewart discloses a simulator that includes a virtual- cluster generator.

The examiner takes position that a computer system (Fig. 1-2) that includes a simulator that represents a performance with the received topology data and workfload data with the results Cache module in Stewart equates to a virtual cluster generator as well. Stewart teaches a computer system (Fig. 1-2), all elements shown, which includes a simulator that predicts the performance of the resources within a computer system under defined conditions and includes a topology specification that defines the topological relationships (Col. 3 lines 66-67, Col. 4 lines 1-9) which is corresponding to generating a pre-failure cluster.

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunhee Kim whose telephone number is 571-272-2164. The examiner can normally be reached on 8:30am-5:00pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eunhee Kim/
Examiner, Art Unit 2123

/Paul L Rodriguez/
Supervisory Patent Examiner, Art Unit 2123